# Primary physical education in Scotland

# Scotland

## Introduction

Scotland is a small country with a population of 5.3 million people occupying the northern third of Great Britain and one of four countries that constitute the United Kingdom alongside England, Northern Ireland and Wales. The Acts of Union in 1707 joined Scotland to England to create Great Britain, but since the union the continued existence of legal, educational, religious and other institutions distinct from those in the UK have contributed to the continuation of Scottish culture and national identity. Following the Enlightenment in the 18th Century Scotland was transformed into one of the commercial, intellectual and industrial centres of Europe. This has impacted on Scottish culture illustrated in the strong literary, political and intellectual heritage of the country underpinned by a promotion of social justice (Bryce, Humes, Gillies & Kennedy, 2013). In recent times, Scottish identity has been exerted through devolution from the UK parliament in 1999 and the subsequent independence referendum in 2015.

## Education in Scotland

Since the Acts of Union in 1707, the Scottish education system has retained its distinctness from the rest of the United Kingdom and has been a mark of the country's national identity (Anderson, 2013). From the age of five, children enter an 11 year period of compulsory schooling, with a further two optional years. The majority of schooling is state-funded and provided by Scotland's 32 local authorities; there are just over 4% of children attending independent (private) schools within Scotland (Smith, 2013). Primary schooling, for children aged 3-12, and secondary schooling, for those aged 12-18, represent the main education sectors, although pre-school provision, special education, post-school provision involving

further education colleges and universities, and community education, all make a significant contribution to this formal education process (Smith, 2013). The Scottish Government initiates education policy which is then taken forward through a complex dissemination process that involves governmental organisations (e.g. Education Scotland), agencies outside the political machine (e.g. the General Teaching Council for Scotland) and the local authorities (Humes, 2013).

Focusing specifically on the structures of primary education, within Scotland the academic year typically runs from the middle of August until the end of June, and is split into four terms (August - October; October - December; January - April; April - June). However, there are slight variations in the timing of the school year and vacation periods across each of the 32 local authorities. Similarly, the timing of the school day varies slightly between local authorities, but generally primary aged children attend school five days a week from 9am until around 3pm. The stages of primary school education run from nursery to Primary 7 (please see table 1 for stages with corresponding ages and curriculum levels).

Following devolution in 1999, the Scottish Education system has become the focus of considerable internal and external attention (Bryce, et al., 2013). With greater emphasis now placed on lifelong learning, the Scottish Government has instigated significant educational reform, particularly through the introduction of Curriculum for Excellence (CfE) (Scottish Executive[1], 2004a) and numerous efforts targeted at teacher education (e.g. Scottish Executive Education Department, 2001; Scottish Government, 2011a). The underlying premise of CfE was to achieve greater curriculum coherence across the 3-18 age range and beyond, with the long term aim of promoting lifelong learning (see table 1 for the CfE levels at the primary stage) (Priestley & Humes, 2010).

[1] The Scottish Executive was renamed the Scottish Government in 2006

| Primary Stages | Age at Start of School Year | Corresponding Curriculum for Excellence Level |
|---|---|---|
| Nursery | 3-4 | Early |
| Primary 1 | 4-5 | |
| Primary 2 | 5-6 | First |
| Primary 3 | 6-7 | |
| Primary 4 | 7-8 | |
| Primary 5 | 8-9 | Second |
| Primary 6 | 9-10 | |
| Primary 7 | 10-11 | |

(Table 1 Primary Stages, Ages and Curriculum for Excellence Levels)

From 2009 onwards, Scottish education has experienced the implementation of CfE, as the policy has been enacted within local authorities and schools. This implementation process, however, has not been straightforward and has been characterised by continued refinement at the policy level as the original curriculum documentation has been extended and amended. As we now discuss, the introduction of CfE and this focus on lifelong learning and teacher education has proved significant for primary physical education.

## Official Curriculum

Before outlining the aims and outcomes of the primary physical education curriculum it is important to provide some background to explain the underpinning rationale. In 2001, the Inspectorate for Education within Scotland published a report on the physical education curriculum, learning, teaching and resourcing within Scottish primary schools (Her Majesty's Inspectorate for Education (HMiE), 2001). Whilst some positive aspects were identified, this report raised numerous concerns about the quality of primary physical within Scottish schools and lead to a number of reforms which were incorporated into the development of CfE. Around the same time as this HMiE report, the first Scottish Physical Activity Strategy was published and identified the minimum level of daily activity required by young people to

provide health benefits (Scottish Executive, 2003). To provide a physical education response to these developments, a Physical Education Review Group (PERG) was formed by the Scottish Executive and drew its membership from a range of bodies and individuals involved in education, physical education, and sport. The PERG report (Scottish Executive, 2004b) proposed that the subject had a central role to play in the promotion of health and wellbeing and therefore was an aspect of the curriculum which required greater priority and should build the foundations for healthy and active lifestyles from an early age (Scottish Executive, 2004c). The PERG proposed three main aims for the future development of physical education in Scotland: more time for physical education, more teachers of physical education and more choice in physical education. Taken together, the introduction of CfE and the recommendations from these key Scottish Government reports have had a significant impact on the physical education curriculum within Scottish primary schools.

With the introduction of CfE, physical education began to prosper as it was moved from the expressive arts to the new curriculum area of health and wellbeing (Scottish Government, 2009a). In response to wider societal concerns about the nation's health and physical inactivity (Scottish Executive, 1998), health and wellbeing emerged as a new core area of the curriculum alongside numeracy and literacy. These three core areas are described as the responsibility of all and are to be integrated across the curriculum (Scottish Government, 2009a). Consistent with the United Nations Convention on the Rights of the Child, the health and wellbeing curriculum area sets out the right for all children and young people to have access to appropriate health services and to have their health and wellbeing promoted (Scottish Government,2009b). Importantly, health and wellbeing is viewed in a holistic sense with specific focus placed on mental, social, emotional and physical wellbeing (Gray, Mulholland & MacLean, 2012). The overall outcome for learning in health and wellbeing is for children and young people to develop the knowledge and understanding, skills,

capabilities and attributes which they need for mental, emotional, social and physical wellbeing now and in the future (Scottish Government,2009b).

The health and wellbeing curriculum area is constituted of six organisers, one of which is physical education, physical activity and sport, the other five are:

- mental, emotional, social and physical wellbeing;
- planning for choices and changes;
- food and health;
- substance misuse, and
- relationships, sexual health and parenthood

(Scottish Government, 2009b).

While physical education, physical activity and sport are presented as one area of health and well-being, each of these components receives individual attention within the CfE guidelines. As such, having played a somewhat marginal role within the expressive arts curriculum, the physical domain now holds a more prominent position within CfE, with physical education itself now recognised as holding a key role across the education, health and sport sectors (Scottish Government, 2011b). Indeed the overall aim for the experiences and outcomes which constitute physical education are to establish a pattern of daily physical activity leading to sustained physical activity in adult life. Experiences and outcomes are intended to be used by teachers to create learning experiences and provide structure to the curriculum. Within physical education, they are organised under three headings: movement skills, competencies and concepts; cooperation and competition, and evaluating and appreciating. Taken together these experiences and outcomes should provide learners with opportunities for progression in learning as they build their physical competences, improve fitness and develop personal and interpersonal skills and attributes. Furthermore, CfE places emphasis

on choice; this is to be achieved within physical education by providing practical learning experiences that offer young people the opportunity to experience a range of physical activities, to work individually and in groups, and both in indoors and outdoors environments.

## Learning Programmes

Although Scotland is a small country, it would be misleading to suggest there is a 'typical' learning programme or lesson for primary physical education (see Jess, McEvilly & Carse, 2016). However, as in many other parts of the world, many primary schools still deliver a multi-activity curriculum programme in which specific physical activities are sampled in 'blocks' of four to six weeks to reflect the structure of the school year. With the school year split into four terms, it is therefore common for two or more activities, particularly sports and games, to be taught within each term. However, the recent upsurge in more contemporary and in-depth professional learning for primary teachers across the country, has seen the dominance of this multi-activity approach increasingly being challenged as more holistic, models-based and interdisciplinary practices have gradually been introduced to schools (Jess, Carse, McMillan & Atencio, 2012; Carse, 2015; Jess, Carse & Keay, 2016).

This transition towards more holistic approaches has largely come about as a result of physical education being moved into the core area of health and well-being (Scottish Government, 2009b); the nationwide introduction of 'Significant Aspects of Learning'(Education Scotland, 2014) to complement the experiences and outcomes and aid assessment (to be discussed in more detail within the assessment section), and the complexity-informed core learning and basic moves (Jess, 2012) approaches that are common in many primary schools. In line with Bailey et al. (2009), these holistic approaches seek to help primary school children develop the interrelated physical, cognitive, social and emotional learning that acts as a foundation for successful engagement in physical activity

within and beyond the school. In addition, more integrated and interdisciplinary physical education models have been introduced in primary schools; these different models include sport education, cooperative learning, teaching personal and social responsibility, critical thinking and teaching games for understanding (TGfU). Supported by Education Scotland, a cognitively focussed programme, *Better Movers Better Thinkers* (Dalziell, Boyle & Mutrie, 2015) has also been introduced 'to develop the ability to move and think in an integrated way within PE' (p. 724) by focussing on moving and thinking, executive functioning and scaffolding practices.

With holistic, contemporary models and interdisciplinary approaches now more common, primary physical education learning programmes and lessons in Scotland are beginning to move beyond the skill technique and activity specific sampling sessions of the multi-activity approach. Efforts establish learning programmes that revisit and scaffold children's learning and also seek to connect physical education learning across and beyond the school are increasingly being reported in the literature (e.g. Thorburn, Carse, Jess & Atencio, 2011; Carse, 2015). As a consequence, it is not uncommon for primary school children, particularly early years children, to work in different movement 'stations' over an extended period of time in a manner that is similar to their work in classroom settings (e.g. Jess, Atencio & Carse, 2013). Therefore, while primary physical education programmes in Scotland may still be dominated by the more traditional multi-activity approach in many places, there is a growing body of evidence reporting that the recent introduction of more holistic and educationally focussed developments are impacting on practice.

## Resourcing

Reflecting the range of learning programmes that contribute to the primary physical education curriculum there is not a specific resource, textbook or programme plan used

within Scotland. Resources used in primary physical education come from a variety of sources: developed by teachers specific to their school contexts (e.g. Begg & Watson, 2010); developed by local authorities working with universities and other partners (e.g. The Connections Resource, South Lanarkshire and Scottish Borders Councils in partnership with University of Glasgow, Univeristy of West of Scotland, NHS Scotland and South Lanarkshire leisure and Culture; Early Moves Resource City of Edinburgh Council in partnership with University of Edinburgh), and national resources promoted through government bodies such as sportscotland and Education Scotland (e.g. TOP Play/Sport; Better Movers, Better Thinkers). Within schools where models based approaches have been developed, use will have been made of corresponding academic texts (e.g Siedentop, Hastie &Van Der Mars, 2011; Griffin & Butler, 2005)

In terms of physical resources, the HMiE Report (2001) noted that primary schools generally had suitable accommodation and an appropriate range and quality of resources for physical education. However, it was also reported that most schools did not provide changing facilities, that the quality of accommodation varied depending on the size and design of the school, and that school halls were often used for other activities beyond physical education such as assemblies, drama and accommodating school lunches. The past decade has seen the Scottish Government pursue a School Estate Strategy with the aim of enhancing teaching and learning environments, in relation to primary physical education this strategy has been supported with specific facilities guidance from sportscotland (sportscotland, 2004). This guidance takes account of the 2 hour requirement for physical education and has accordingly made recommendations on the design of sports halls and other physical space for physical education. Notably this guidance emphasises the need for changing facilities and specifically recommends that school dining should not take place in space used for physical education.

To support the developments that have taken place in primary physical education over the past decade considerable amounts of money have been made available by the Scottish Government. Much of this funding was specifically targeted at the staffing base for physical education and will be discussed in more detail in the teacher preparation section. Concurrently, funding has also been made available directly to schools through a grant initiative. Introduced in 2013, Education Scotland facilitated the core physical education fund, a grant initiative where schools or clusters of schools had the opportunity to apply for up to £3000 of funding which could be used to improve the quality of learning experiences in physical education. There were four phases of the fund, which is now closed, in the report on the last phase, it was stated that 92 schools had successful bids out of 393 applications (Education Scotland, 2016). Overall, the last decade has seen significant financial input into primary physical education developments. However, despite this investment and initiatives, physical space and resources continue to be a concern for schools and teachers, and a potential barrier, inhibiting efforts to promote physical education (Lowden, Hall, Watters, O'Brien & McLean, 2014).

Complementary to physical education resourcing and to support participation levels and opportunities within and beyond physical education, the Active Schools Programme was introduced in 2000 and soon became embedded within Scottish primary schools. Funded by the Scottish Government and coordinated by sportscotland, the national sports agency, the Active Schools programme (https://sportscotland.org.uk/schools/active-schools/) operates through a network of local authority managers, school-based coordinators in primary and secondary schools and volunteers who deliver activity sessions in schools and communities across Scotland (Reid, 2009). The Active Schools co-ordinators have a significant role in the integration of physical education, physical activity and sport by creating opportunities for children to be physically active before, during and after school, as well as in the wider

community. Official reports on the effectiveness of Active Schools (e.g. sportscotland, 2008) have emphasised the significant impact the programme has had on physical activity levels, particularly in primary school settings.

## Frequency

Curriculum time for physical education in Scottish primary schools has been at the forefront of developments over the last decade. Following the PERG report in 2004, the Scottish Executive identified ten actions to address the report's recommendations, one of which was that schools should accommodate for the provision of at least two hours of quality physical education every week and set a target for this to be achieved within four years. However, in 2009, the Government's Health and Sport Committee (Scottish Parliament, 2009) reported the lack of progress being made within primary schools to meet the two hour target and noted how this was 'disturbing' and highlighted the continued 'devaluation of physical education'. Consequently, the Scottish Government intervened and made a commitment to ensure that the two hour target would be met by all primary schools by 2014. Progress towards meeting this target was now more closely monitored with questions about physical education provision in schools included in the national annual healthy living survey. This data suggests that over the last five years, the number of primary schools reaching the two hour target has risen steadily from 84% in 2012 to 99% in 2016 (Scottish Government, 2016a). With the two hour commitment in place, the Government's focus is now on the quality of the physical education experiences received by primary school children.

## Who delivers Physical Education?

In Scotland, while generalist class teachers largely assume the responsibility for teaching physical education in primary schools, there has always been significant input by specialist

physical education teachers. Most physical education specialist teachers working in Scottish primary schools will have come through an undergraduate or postgraduate physical education teacher education programme which will have placed more emphasis on secondary rather than primary education. In addition, rather than working in one primary school, most primary physical education specialist teachers have responsibility for delivering physical education across a number of schools within a local authority. While the number of specialist teachers involved in primary physical education has traditionally been higher in the east of the country, exact figures are not available and it is possible that the current balance may have changed in recent years with the introduction of the postgraduate certificate programmes for primary teachers and the various other initiatives outlined in the next section.

Traditionally, it was common for the itinerant specialist teacher and the class teacher to work together across blocks of time throughout an academic year. Consequently, a pattern often emerged where the class teacher would observe the physical education lessons delivered by the specialist teachers, discuss issues and then deliver a similar follow-up lesson (Carse, 2015). Working co-operatively in this way with the specialist teachers helped support generalist class teachers by providing them with a point of reference for their own teaching of the subject and 'in-situ' professional learning. Indeed, the HMiE report (2001) highlighted the effective contribution specialist teachers made to the physical education curriculum in primary schools.

However, when ‘A Teaching Profession for the 21st Century’ was published in 2001 (SEED, 2001), it signalled a change in the role of the primary physical education specialist and, in particular, their working relationship with class teachers. The aim of this policy was to improve the conditions of service for teachers by incorporating a reduction in class contact time for primary teachers and also introducing a framework for professional development. With primary teachers being provided with 2.5 hours of non-class contact time each week,

both primary schools and local authorities were initially challenged to cover the additional teaching time (Blane, 2004). Despite some initial resistance, a common solution that emerged across much of Scotland was to employ specialist teachers from physical education, art or music to deliver the non-class contact time. While this may have been perceived as a positive development for physical education, it also meant that generalist primary teachers were no longer expected to observe the specialist's lessons, had less opportunity to liaise with the specialist and, in many cases, no longer delivered physical education themselves. However, the introduction of CfE and the move towards two hours of curriculum physical education each week has seen the re-mergence of class teachers involvement in the teaching of physical education. In addition, the increased attention on physical education has resulted in some groups and agencies from outside the education profession being employed to contribute to physical education curriculum time within Scottish primary schools. However, unlike the situation in England, (Griggs, 2016), this approach is being resisted at both the local and national level (Scottish Government, 2011b; Lowden et al., 2014). As such, most of the teaching of primary physical education currently remains within the education profession in Scotland, predominantly taught through a combination of generalist class teachers and physical education specialist teachers.

## Teacher Education

While the recent focus on primary physical education has resulted in increased professional development opportunities for primary class teachers (Elliot & Campbell, 2015), developments within initial teacher education (ITE) have unfortunately been less positive. Although the ITE of primary teachers remains firmly rooted in Scotland's university sector, teacher education policy has moved towards a more academic focus (Scottish Government, 2011a), which means that the time allotted to curriculum subjects has been reduced. This

means that physical education receives a 'light touch' through the ITE programmes and most offer a physical education elective course for final year students with 20-30 hours of contact. Typically, these elective courses explore the primary physical education curriculum and pedagogy through a mixture of practical workshops and seminars. Overall, many of the global concerns that have long been reported about ITE in primary physical education (e.g. Harris, Cale & Musson, 2012) appear to also be a feature in Scotland.

Conversely, as discussed by Jess, Carse & Keay in Chapter X, recent professional development opportunities for primary school teachers in Scotland have been more in evidence. In response to the PERG recommendations, the Universities of Edinburgh and Glasgow were both commissioned by the Scottish Executive in 2006 to develop, deliver and evaluate the impact of postgraduate certificates in primary physical education. Government funding in the region of 6 million pounds was made available for this project and, between 2006 and 2012, led to over 1,100 primary teachers taking the opportunity to develop a specialism in physical education. The programmes had a specific aim of building the confidence and competence of teachers by offering an opportunity to engage with primary physical education in considerably more depth than traditional professional development courses. Instead of providing pre-prepared resources and lesson plans, these programmes helped the teachers explore key theoretical concepts, reflect on their beliefs, values and contexts and design learning experiences in physical education aligned to the needs of the children in their classes (Thorburn et al., 2011).

Initial findings tracking the impact of these programmes reported increases in teachers' confidence, subject knowledge and general approach to the teaching of physical education (Jess, McEvilly, Campbell & Elliot, 2012). Given the longer timescale of this professional development experience, many of the teachers began to develop physical education programmes that were contextualised within their individual school settings and some began

to adopt curriculum leadership roles (Carse, 2015). Interestingly, while the teachers acknowledged the positive impact of a supportive policy context, they also experienced considerable autonomy to experiment and develop their physical education ideas because of the on-going marginal status of physical education within their schools. Conversely, a regular constraint was the feeling of isolation as the teachers tried to collaborate with their colleagues and other physical education practitioners. In particular, the teachers reported how they struggled to overcome the traditional view of physical education as a multi-activity sport and games programme held by most of their colleagues and the children (Carse, 2015).

More recently and complementary to the postgraduate certificates, joint funding from sportscotland and Education Scotland, £6.8 million and £4.8 million respectively across local authorities has supported a package of national initiatives to increase the support available to schools and teachers (Scottish Government, 2016b). The most significant initiatives have been the Core PE fund, discussed earlier and employing local authority lead officers for physical education (PELOs). Coordinated by Education Scotland, the PELOs have been supported to create a network, which has set a context for professional learning and exchanging ideas and approaches focussed on the enhancement of the quality of physical education within schools, particularly primary schools. A recent report evaluating these initiatives noted the positive impact that the PELOs have had on promoting the two hour target and on teachers' learning and teaching practice (Lowden et al, 2014). Although developments in ITE may be a concern at this time, the last decade has seen many generalist class teachers take up the opportunity to engage in more in-depth and long term professional development in primary physical education.

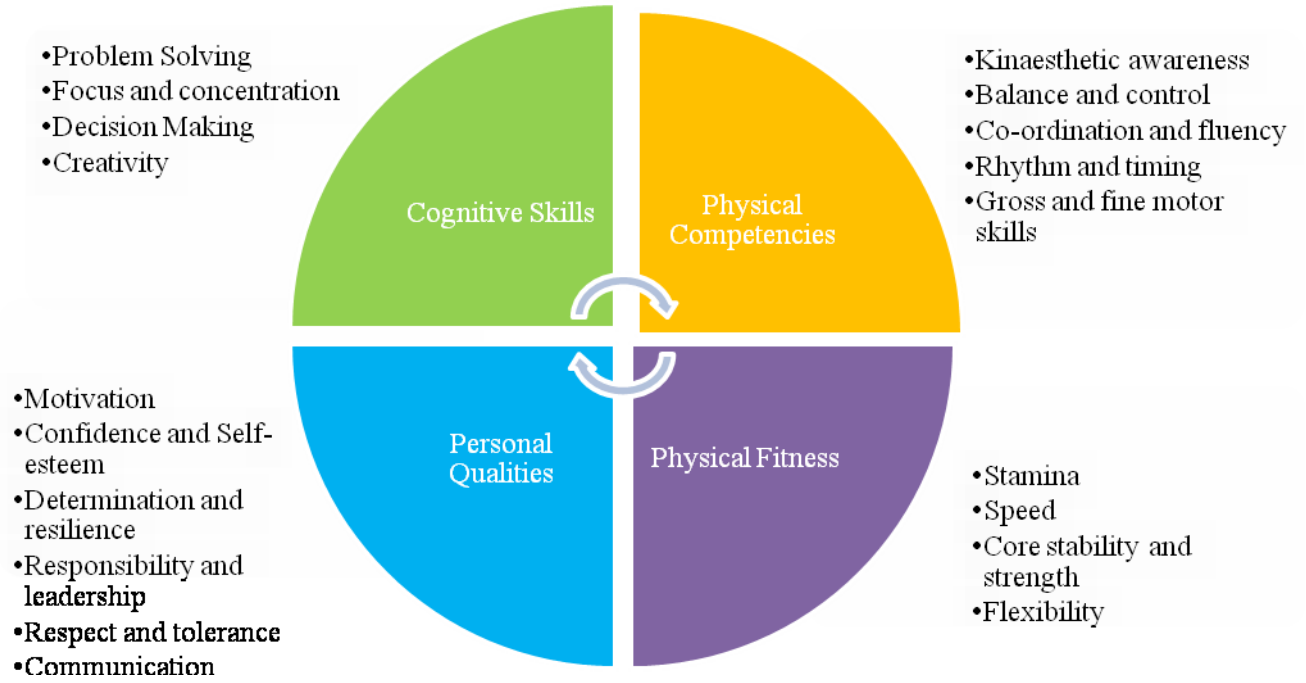
## Assessment

The Curriculum for Excellence guidelines provide the main guidance on assessment. Initially, Curriculum for Excellence attempted to move away from prescriptive curriculum guidelines and testing to provide more open-ended experiences and outcomes as a way to describe the expectations for learning and progression across the curriculum. Broader levels of learning were introduced from 3-18 - early, first, second, third and fourth, senior phase - to 'reflect the stages of maturation of children and young people' (Scottish Government, 2008, p28). As discussed earlier, teachers have been encouraged to use the experiences and outcomes to develop the curriculum focusing on the development of knowledge, understanding, skills and attributes for learning, life and work (Scottish Government, 2009a). Initially the experiences and outcomes and broader levels appeared to afford teachers greater scope to be curriculum innovators and respond to the learning needs and interests of the children within the specific contexts they were working in (Priestley & Humes, 2010). However, through the implementation of CfE concerns were raised that the experiences and outcomes were too broad to support assessment and that further guidance was required. Building on the experiences and outcomes and in an attempt to further support teachers to assess progress and achievement, Significant Aspects of Learning (SALs) were introduced as part of the CfE guidelines (Education Scotland, 2012).

In relation to assessment within physical education the aim of the experiences and outcomes is to provide guidance for teachers in planning learning experiences that take into account what children can be expected to achieve at different points in their learning journey. Complementary to the experiences and outcomes the SALs support teachers to provide progressive learning contexts by viewing physical education in a holistic sense. In this respect the integration of four main areas is emphasised: physical competencies; cognitive skills; physical fitness and personal qualities (see figure 1 for an overview of the SALs) (Education Scotland, 2014). The paper introducing the SALs states that the aim is to:

'help practitioners to make judgements as to the achievement of a level across all lines of development, to work with colleagues to create a shared understanding of standards and learners' progress and to identify key assessment opportunities and forms of assessment' (Education Scotland, 2014. p.1).

Therefore, it is evident that the emphasis is on embedding assessment within teaching and using it to inform the learning process rather than on the measurement of learning. This emphasis on assessment as part of the learning process is also articulated in the focus on progression in learning within physical education through experiential learning which centres around promoting breadth, challenge and application within learning experiences.




(Figure 1: Adapted from Education Scotland, 2014)

However, despite the seeming emphasis on trusting teacher judgement within assessment through CfE this has been somewhat eroded in recent years with the Scottish Government placing renewed emphasis on standardised testing for assessment through the National

Improvement Framework (NIF) (Scottish Government, 2016c) . In an attempt to 'close the attainment gap' the NIF has seen standardised testing introduced in Maths and Literacy, which raises questions over the place of curriculum areas not scrutinised by standardised testing and in particular the core status of health and wellbeing within the curriculum.

## Significant factors worth noting

Following its long-term positioning on the margins of Scottish primary education, the last decade has seen a change in fortune for physical education. With new curriculum guidance, considerably more curriculum time for all children and a significant investment in primary teachers' professional development, physical education in Scotland has passed though one of its more positive and fruitful periods. Acknowledging the complexity of the educational change process, however, the next challenge will be to develop the capacity to sustain this positive development trajectory of primary physical education in the years to come.

## References


Anderson, R. (2013) The History of Scottish Education, pre 1980. In T. G. K. Bryce, W. M. Humes, D. Gillies and A. Kennedy (Eds.) *Scottish Education Fourth Edition: Referendum*, Edinburgh: Edinburgh University Press, pp241-250.

Bailey, R., Armour, K., Kirk, D., Jess, M., Pickup, I., & Sandford, R. (2009) The educational benefits claimed for physical education and school sport: an academic review. *Research Papers in Education*, 24(1), 1-27.

Begg, M. & Watson, C. (2010) *Sport Education at Donibristle Primary School*, Glenrothes, Fife, Fife Regions Local Education Authority.

Blane, D. (2004) When teacher's away we can play. *Times Educational Supplement*, Online at http://www.tes.co.uk/article.aspx?storycode=398708 .

Bryce, T. G. K., Humes, W. M., Gillies, D. & Kennedy A. (Eds.) *Scottish Education Fourth Edition: Referendum*, Edinburgh: Edinburgh University Press.

Carse, N. (2015). Primary teachers as physical education curriculum change agents. *European Physical Education Review*, 21(3), 309-324, DOI: 1356336X14567691.

Dalziell, A., Boyle, J., & Mutrie, N. (2015). Better Movers and Thinkers (BMT): An Exploratory Study of an Innovative Approach to Physical Education. *Europe's Journal of Psychology*, 11(4), 722-741.

Education Scotland (2012) *Curriculum for Excellence Briefing 2: Assessing Progress and Achievement in the 3-15 Broad General Education*. Edinburgh: Education Scotland.

Education Scotland (2014) *Professional learning paper: Assessing progress and achievement in Health and Wellbeing – Physical Education*. Edinburgh: Scottish Government.

Education Scotland (2016) *Core Physical Education Fund*. Available at http://www.educationscotland.gov.uk/learningandteaching/curriculumareas/healthandwellbeing/supportmaterials/corephysicaleducationfund/introduction.asp (Accessed: 19 December 2016).

Elliot, D. L., & Campbell, T. (2015). 'Really on the ball': exploring the implications of teachers' PE-CPD experience. *Sport, Education and Society*, 20(3), 381-397.

Gray, S., Mulholland, R., & MacLean, J. (2012). The ebb and flow of curriculum construction in physical education: a Scottish narrative. *Curriculum Journal*, 23(1), 59-78.

Griffin, L. L., & Butler, J. (2005). *Teaching games for understanding: Theory, research, and practice*. USA: Human Kinetics.

Griggs, G. (2016). Spending the Primary Physical Education and Sport Premium: a West Midlands case study. *Education 3-13*, 44(5) 547-555.

Harris, J., Cale, L., & Musson, H. (2012). The predicament of primary physical education: a consequence of 'insufficient' ITT and 'ineffective' CPD? *Physical Education and Sport Pedagogy*, 17(4), 367-381.

HMiE (2001) *Improving Physical Education in Primary Schools*, Edinburgh: HMiE.

Humes, W. (2013) Policy Making in Scottish Education. In T. G. K. Bryce, W. M. Humes, D. Gillies & A. Kennedy (Eds.) *Scottish Education Fourth Edition: Referendum*, Edinburgh: Edinburgh University Press, pp98-108.

Jess, M., (2012). The Future of Primary PE: A 3-14 Developmental and Connected Curriculum. In G. Griggs (Ed.), *An Introduction to Primary Physical Education*. London: Routledge, pp37-54.

Jess, M., Atencio, M. & Thorburn, M., (2011). Complexity Theory: Supporting Curriculum and Pedagogy Developments in Scottish Physical Education. *Sport Education and Society,* 16(1), 179-199.

Jess, M., Atencio, M. & Carse, N. (2012). Introducing conditions of complexity in the context of Scottish physical education. In A. Ovens, T. Hopper and J. Butler (Eds.) *Complexity thinking in physical education: Reframing curriculum, pedagogy and research*.. London: Routledge, pp27–41.

Jess, M., Carse, N., McMillan, P. & Atencio, M. (2012). The emergence of Sport Education in Scottish primary schools. In P. Hastie (Ed.) *Sport Education International Perspectives*. London: Routledge, pp41-57.

Jess, M., McEvilly, N., Campbell, T. & Elliot, D. (2012). The Scottish Primary Physical Education Project Evaluation Report 2. *The Postgraduate Certificates in Primary Physical Education: Initial Impact on Teachers*.

Jess, M., Carse, N. & Keay, J.(2016). The Primary Physical Education Curriculum Process: More Complex than you might think!!, *Education 3-13*, 44(5), 502-512, DOI: 10.1080/03004279.2016.1169482.

Jess, M., McEvilly, N. & Carse, N (2016). Moving primary physical education forward: start at the beginning, *Education 3-13*, DOI:10.1080/03004279.2016.1155072.

Lowden, K., Hall, S., Watters, N., O'Brien, J & McLean, M. (2014). *Measuring the Impact of the 'Two Hours/Two Periods of Quality Physical Education' Programme: Final Report*. Glasgow: Education Scotland.

Priestley, M., & Humes, W. (2010). The development of Scotland's Curriculum for Excellence: amnesia and déjà vu. *Oxford Review of Education*, *36*(3), 345-361.

Siedentop, D., Hastie, P. A., & Van der Mars, H. (2011). *Complete guide to sport education*. USA: Human Kinetics.

Scottish Executive (1998) *Towards a Healthier Scotland: A White Paper on Health*. Edinburgh: HMSO.

Scottish Executive Education Department (SEED) (2001) *A Teaching Profession for the 21st Century: Agreement reached following the McCrone Report.* Edinburgh: Scottish Executive.

Scottish Executive (2003) *Lets make Scotland more active: A strategy for physical activity.* Edinburgh: HMSO.

Scottish Executive (2004a) *A Curriculum for Excellence: the curriculum review group*. Edinburgh: Scottish Executive.

Scottish Executive (2004b) *The report of the review group on physical education.* Edinburgh: HMSO.

Scottish Executive, (2004c), *The Report of the Review Group on Physical Education: Response from Peter Peacock, Minister for Education and Young People, June 14th, 2004.* Edinburgh: Scottish Executive.

Scottish Government (2008) *Curriculum for Excellence Building the Curriculum 3: A Framework for Learning and Teaching*. Edinburgh: Scottish Government.

Scottish Government (2009a) *Curriculum for Excellence Building the Curriculum 4: Skills for learning, skills for life and skills for work.* Edinburgh: Scottish Government.

Scottish Government (2009b) *Curriculum for Excellence: health and wellbeing principles and practice*. Edinburgh: Scottish Government.

Scottish Government (2011a) *Report of a review of teacher education in Scotland: teaching Scotland's future.* Edinburgh: Scottish Government.

Scottish Government (2011b) *Physical Education, Physical Activity and Sport Excellence Group: Physical Education, Physical Activity and Sport Report.* Edinburgh: Scottish Government.

Scottish Government (2016a) *Summary statistics for attainment, leaver destinations and healthy living*. Edinburgh: National Statistics Scotland.

Scottish Government (2016b) Sport and PE in Schools. Online at http://www.gov.scot/Topics/ArtsCultureSport/Sport/MajorEvents/Glasgow-2014/Commonwealth-games/Indicators/AiSch.

Scottish Government (2016c) *National Improvement Framework For Scottish Education: Achieving Excellence And Equity*. Edinburgh: Scottish Government.

Scottish Parliament (2009) *Pathways into sport and physical activity Report, Health and Sport Committee Report, SP Paper, 260*. Edinburgh: Scottish Parliament.

Smith, I. (2013) Educational Provision: An Overview. In T. G. K. Bryce, W. M. Humes, D. Gillies & A. Kennedy (Eds.) *Scottish Education Fourth Edition: Referendum*, Edinburgh: Edinburgh University Press, pp13-27.

sportscotland (2004) *Primary School Sports Facilities*. Edinburgh: sportscotland.

sportscotland (2008) *Active Schools Network evaluation year three 2006/2007:Summary report.* Edinburgh: sportscotland.

Thorburn, M., Carse, N., Jess, M., & Atencio, M. (2011). Translating change into improved practice: Analysis of teachers' attempts to generate a new emerging pedagogy in Scotland. *European Physical Education Review*, 17(3), 313-324.